CAREWELL
A LEARNING INTEGRATED CARE SYSTEM

Veli Stroetmann, MD, PhD,
Reinhard Hammerschmidt

With: Esteban de Manuel Keenoy, Joanna Mora,
Ane Fullaondo

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ICT supported integrated care in Europe

Numerous points of learning, feedback & improvement

- Levels: local, intra- / inter-regional, EU
- European Innovation Partnership on Active and Healthy Ageing (EIP on AHA)
  - Coordinated exchange of good practice & working together
    CoP 6 areas, >3000 partners, Action Group on Integrated Care (B3)
  - B3 Action Area topics: organisational models, pathways, patient empowerment, change management, stratification, ICT, financing
  - Supported by web platform, collaborative tools, meetings, conferences, good practice database, reference sites network, scale up roadmap
- Regional pilots (>30 with EU co-funding) sharing common approach, methodologies:
  - Needs & requirements gathering
  - Use case development
  - Organisational model assessment & transformation
  - Overall service architecture concept
  - Evaluation framework (processes & outcomes)
    - incl. continuous resource modelling & value case building
  - Guidelines for deployment of integrated care
What is CareWell about?

- CareWell supports the integration of care in six European regions
- Aims to improve support for frail elderly patients through multidisciplinary programmes facilitated by ICTs
- Specific focus on elderly people with complex health and social care needs and a high risk of hospital or care home admission
- ICT enabled health and social care services coordination, monitoring, patient self-management, and informal care giver involvement
What is CareWell about?

- All six regions implement new ICT systems, improve existing ones and test their interconnection, setting up deployment plans.
- Five out of the six pilots have a parallel comparison group of patients next to the intervention group.
- CareWell services are based on two pathways supported by ICT:
  - Integrated care coordination
  - Patient empowerment & home support
## ICT building blocks & optional components

<table>
<thead>
<tr>
<th>Data sharing and coordination</th>
<th>ICT based integration building blocks</th>
<th>Optional components</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Integrated data access for care providers in different agencies and informal carers</td>
<td>Integrated Care Record</td>
</tr>
<tr>
<td></td>
<td>Integrated data access for care providers in different agencies and informal carers</td>
<td>Sharing clinical, scheduling, monitoring information; secure emailing</td>
</tr>
<tr>
<td></td>
<td>Integrated data access for care providers in different agencies and informal carers</td>
<td>Shared EHR / Access to subsets of EHR; non face-to-face consultation via EHR / Web-based portal</td>
</tr>
<tr>
<td></td>
<td>Integrated data access for care providers in different agencies and informal carers</td>
<td>Input from health and social care actors / interfaces to different ICT tools</td>
</tr>
<tr>
<td></td>
<td>Integrated data access for care providers in different agencies and informal carers</td>
<td>Electronic Prescription</td>
</tr>
<tr>
<td></td>
<td>Integrated data access for care providers in different agencies and informal carers</td>
<td>Integration of vital sign / health monitoring data into care planning &amp; management</td>
</tr>
<tr>
<td></td>
<td>Design and execution of pre-planned care pathways enabling temporal coordination between provision steps taken by care providers in different agencies, informal carers and cared for people</td>
<td>Charting tools for integrated care pathways design, Workflow engines</td>
</tr>
<tr>
<td></td>
<td>Design and execution of pre-planned care pathways enabling temporal coordination between provision steps taken by care providers in different agencies, informal carers and cared for people</td>
<td>Joint/shared scheduling, daily schedulers</td>
</tr>
<tr>
<td></td>
<td>Design and execution of pre-planned care pathways enabling temporal coordination between provision steps taken by care providers in different agencies, informal carers and cared for people</td>
<td>Shared care plans</td>
</tr>
<tr>
<td></td>
<td>Design and execution of pre-planned care pathways enabling temporal coordination between provision steps taken by care providers in different agencies, informal carers and cared for people</td>
<td>Team coordination support</td>
</tr>
<tr>
<td></td>
<td>Access to the home: home-based systems (Telemonitoring and/or Telecare TM/TC) by care providers in different agencies and informal carers</td>
<td>Vital parameter monitoring</td>
</tr>
<tr>
<td></td>
<td>Access to the home: home-based systems (Telemonitoring and/or Telecare TM/TC) by care providers in different agencies and informal carers</td>
<td>Patient’s daily symptom questions</td>
</tr>
<tr>
<td></td>
<td>Access to the home: home-based systems (Telemonitoring and/or Telecare TM/TC) by care providers in different agencies and informal carers</td>
<td>Alerts, prompts, reminders configuration and handling/ protocols and escalation procedures; passive and/or active alarms</td>
</tr>
<tr>
<td></td>
<td>Access to the home: home-based systems (Telemonitoring and/or Telecare TM/TC) by care providers in different agencies and informal carers</td>
<td>Automated self-care and (older people wellness and informal carers) promotional/ educational/ training/ planning tools</td>
</tr>
<tr>
<td></td>
<td>Access to the home: home-based systems (Telemonitoring and/or Telecare TM/TC) by care providers in different agencies and informal carers</td>
<td>Life-style/behaviour monitoring</td>
</tr>
<tr>
<td></td>
<td>Access to the home: home-based systems (Telemonitoring and/or Telecare TM/TC) by care providers in different agencies and informal carers</td>
<td>Physical training &amp; coaching programmes/tools</td>
</tr>
<tr>
<td></td>
<td>Access to the home: home-based systems (Telemonitoring and/or Telecare TM/TC) by care providers in different agencies and informal carers</td>
<td>Access to other services to address social isolation</td>
</tr>
<tr>
<td></td>
<td>Access to the home: home-based systems (Telemonitoring and/or Telecare TM/TC) by care providers in different agencies and informal carers</td>
<td>Home safety monitoring (gas, temperature, light, doors, windows)</td>
</tr>
<tr>
<td></td>
<td>Real-time communication between care providers in different agencies and informal carers, e.g. support to case conferences, and older people</td>
<td>IP-based screen sharing</td>
</tr>
<tr>
<td></td>
<td>Real-time communication between care providers in different agencies and informal carers, e.g. support to case conferences, and older people</td>
<td>Videoconferencing (VC)</td>
</tr>
<tr>
<td></td>
<td>Real-time communication between care providers in different agencies and informal carers, e.g. support to case conferences, and older people</td>
<td>Telecare service communication with informal or formal carers for care coordination and management</td>
</tr>
<tr>
<td></td>
<td>Real-time communication between care providers in different agencies and informal carers, e.g. support to case conferences, and older people</td>
<td>Call / Contact Centre, Triage / Links with emergency services e.g. ambulance</td>
</tr>
<tr>
<td></td>
<td>Real-time communication between care providers in different agencies and informal carers, e.g. support to case conferences, and older people</td>
<td>Web-based portal</td>
</tr>
<tr>
<td></td>
<td>Real-time communication between care providers in different agencies and informal carers, e.g. support to case conferences, and older people</td>
<td>Centralised and flexible role-, patient- and user- administration</td>
</tr>
</tbody>
</table>
# CareWell pathways

## Coordination pathway

<table>
<thead>
<tr>
<th>Service</th>
<th>Functionalities</th>
<th>ICT solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data access and sharing</strong></td>
<td></td>
<td><strong>Electronic Health Record</strong></td>
</tr>
<tr>
<td><strong>Improve medical diagnostic capability</strong></td>
<td></td>
<td><strong>Electronic prescription</strong></td>
</tr>
<tr>
<td><strong>Improve coordination</strong></td>
<td></td>
<td><strong>Clinical web portals</strong></td>
</tr>
</tbody>
</table>

## Patient empowerment and home-support

<table>
<thead>
<tr>
<th>Service</th>
<th>Functionalities</th>
<th>ICT solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Telemonitoring</strong></td>
<td></td>
<td><strong>Telemonitoring and telecare</strong></td>
</tr>
<tr>
<td><strong>Patient education and self-management</strong></td>
<td></td>
<td><strong>Digital platforms</strong> to promote physical exercise, improve cognitive capacities, daily scheduler</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Messaging</strong> between patients and professionals</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Personal Health Folder</strong> where health reports, drug history, appointments etc. are stored</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>On-line health education</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Follow-up calls</strong></td>
</tr>
</tbody>
</table>
Existing organisational models

Example: Basque Country

**STABLE PATIENT OUT OF HOSPITAL CARE**

- **PRIMARY CARE**
  - GP
    - Therapeutic plan
    - Diagnosis, follow-up
    - Pharmacologic plan
    - Referrals to specialists
    - Test selection
  - F2F, phone
- **EHR**
  - E-prescription

- **COMMUNITY**
  - Social work
    - Follow-up when needed
    - Identifies and reports needs to community nurse
  - F2F, Phone

**UNSTABLE PATIENT OUT OF HOSPITAL CARE**

- **PRIMARY CARE**
  - Care nurse
    - Tests, follow-up visits
    - Pharmacologic follow-up
    - Patient training
    - Coordination with social care
  - Phone
- **PHARMACY**
  - Community Pharmacy
    - Pharmacologic follow-up
  - F2F, phone

**HOSPITAL DISCHARGE PREPARATION**

- **PRIMARY CARE**
  - GP
    - Diagnosis
    - Intensive follow-up
    - Therapeutic plan follow-up
  - Phone

**IN HOSPITAL CARE**

- **HOSPITAL**
  - EHR

- **Hospital Pharmacist**
  - Analysis of drug interaction and side-effects
  - Avoids drug duplication
  - Monodosis preparation
  - EHR

- **Other specialists**
  - Tests, diagnosis
  - Therapeutic plan
  - Diagnosis
  - EHR

- **Hospital nurse**
  - Intravenous medication
  - Patient training
  - Detection of social problems
  - Integrated frailty assessment
  - EHR

- **Reference internist**
  - Tests, diagnosis
  - Therapeutic plan
  - Pharmacologic follow-up
  - EHR, F2F, Phone

**LONG-TERM HOSPITAL**

- **Sub-acute hospital staff**
  - Similar activities than in hospital but patients are in long-term hospitalization

**Emergency room/day care hospital**

- **Emergency**
  - Contact with Primary Care (8h-20h), if out of hours contact emergency
  - Phone

- **Deputy Health Service**
  - Out of care hours Home-visits

- **Care Manager**
  - Tests & therapeutic plan
  - Follow-up
  - Intravenous medication
  - Follow-up visits
  - Referral to specialist
  - Desk, F2F, Interconsult, Email

- **Specialist**
  - Consultations, diagnosis
  - Phone

- **Emergency room**
  - Transport patient to hospital out of hours
  - Phone

- **Emergency care nurse**
  - Coordination with health & social care
  - Activation of ehealth center
  - Phone

- **Primary care nurse**
  - Coordination with health & social care
  - Activation of ehealth center
  - Phone

- **Telecare centre**
  - Health advice and coordination of health resources. Telemonitoring
  - EHR, Phone

- **eHealth centre**
  - Health advice
  - Coordination with health
  - Patient training
  - Assessment of needs and if required, patient referral to other settings (home, sub-acute or long-term hospital)
  - Phone

- **Council Social worker**
  - Coordination with health services (Primary Care)
  - Social care services
  - Email

- **Social EHR**
  - Phone

- **Home**
  - Contact with Primary Care (8h-20h), if out of hours contact emergency
  - Phone

- **Hospital nurse**
  - Intravenous medication
  - Patient training
  - Detection of social problems
  - Integrated frailty assessment
  - EHR

- **Hospital Social team**
  - Assessment of needs and if required, patient referral to other settings (home, sub-acute or long-term hospital)
  - F2F, Phone

EHR: Electronic Health Record; F2F: face-to-face; GP: General Practitioner; CRM: Client Management Relationship
Key factors of the organisational model

**Care management toolkit**

1. **Stratification of patients** into different levels of interventions
2. **Interdisciplinary working team**: nurse care manager, GP, social worker and specialists
3. **Care manager role**: case management, coordination with GP, support patients in the hospital, ED, discharge process
4. **Specialist consultant role**: support to primary care in decision-making
5. **Patient follow-up** out of hospital care to facilitate early detection of worsening
6. Make **care transitions support** a priority: coordination between primary care and hospital, contact patient 24-48h post discharge
7. Use **virtual or in-person multidisciplinary case meetings** to facilitate communication among care providers
8. Emphasize **patient self-management** techniques, especially through motivational interviewing
Self-assessment exercise

- To define the degree of maturity of eight key factors of integrated care
- Detect weakest points & improvement areas
- Specify actions - service procedure or technological adaptation - in the context of the CareWell pathways
Identified improvement areas

Example:

- **Basque Country**
  - Deployment of telehealth Personal Health Folder where patients can access health reports, appointment calendar and self-management information
  - Better coordination between healthcare professionals through integrated care pathways in the CRM

### Identified improvement areas

<table>
<thead>
<tr>
<th>Improvement category</th>
<th>Integrated care coordination pathway</th>
<th>Patient empowerment and home support pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service procedures</strong></td>
<td>Wider deployment of new roles of reference internist and hospital liaison nurse.</td>
<td>Adaptation of existing care pathways for frail elderly patients in order to extend the role of eHealth Centre and Telecare Centre (telemonitoring and/or follow-up calls).</td>
</tr>
<tr>
<td></td>
<td>Establishing procedures to provide messaging between patients and practitioners via Personal Health Folder.</td>
<td>Deployment of different modalities of monitoring patients (questionnaires in Personal Health Folder, phone calls by eHealth Centre, and telemonitoring using devices).</td>
</tr>
<tr>
<td><strong>Technological adaptations</strong></td>
<td>Wider access to the electronic prescription including pharmacists.</td>
<td>Promote patient and caregiver empowerment through educational material in the Personal Health Folder and Osakidetza’s web portal.</td>
</tr>
<tr>
<td></td>
<td>Deployment of messaging between patients and/or caregivers and healthcare practitioners through the Personal Health Folder.</td>
<td></td>
</tr>
</tbody>
</table>

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Integrated care pathways: revised patient journey

- Illustration of the patient’s journey across the health system integrating the new procedures and/or technological adaptations envisaged for Carewell

Example: Basque Country
# ICT-based service evolution

- Tracking of service evolution representing how CareWell impacts on maturity level of services

## Example:

<table>
<thead>
<tr>
<th>Basque Country</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICT-enabled service</strong></td>
<td><strong>Operational</strong></td>
<td><strong>Maturity level</strong></td>
</tr>
<tr>
<td>e-prescription</td>
<td>YES</td>
<td>3</td>
</tr>
<tr>
<td>Messaging clinician $\leftrightarrow$ Patients</td>
<td>YES</td>
<td>1</td>
</tr>
<tr>
<td>EHR</td>
<td>YES</td>
<td>3</td>
</tr>
<tr>
<td>Interconsultation</td>
<td>YES</td>
<td>3</td>
</tr>
<tr>
<td>Call Centre</td>
<td>YES</td>
<td>2</td>
</tr>
<tr>
<td>Virtual Conference</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>PHR</td>
<td>YES</td>
<td>3</td>
</tr>
<tr>
<td>Nurse Information System (record of nursing care)</td>
<td>YES</td>
<td>3</td>
</tr>
<tr>
<td>Educational Platform</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>Collaborative Platform</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>Telemonitoring</td>
<td>YES</td>
<td>2</td>
</tr>
<tr>
<td>Multichannel Centre (Management Telecare Programs)</td>
<td>YES</td>
<td>2</td>
</tr>
</tbody>
</table>
Changes to improve services in the Basque country:

1. Integration into the EHR of data from the hospital pharmacy
2. Integration of systems to provide EHR in a single system for both care sectors (primary and secondary care)
3. Integration of the clinical information from the CareWell chronic programmes in EHR
4. Messaging between patients (PHR) and clinicians (EHR)
5. Improve the Business Intelligence (BI) to provide new functionalities for patient stratification
6. Development of an educational web platform for patients
Risk stratification scores are used in CareWell to identify patients with highly complex needs who are most likely to benefit from the CareWell services.

Risk stratification tools like the ACG (Adjusted Clinical Group) approach are used.

- Age ≥65 years
- At least 2 chronic diseases (COPD, Diabetes and/or CHF)
- Fulfilling local/national criteria of frailty: increased vulnerability, complex health needs and at high risk of hospital or care home admission
- Able to understand and to comply with study instructions and requirement independently or with the help from a carer

Source: Kronikgune
AGC stratification assigns a weight score associated with resources consumption.

Independent variables needed to calculate the risk stratification score stem from several administrative and clinical databases:
- hospitalisation
- emergency visits
- consultation
- prescription
- diagnosis, prescription
- demographic data, etc.

Data needs to be linked at patient level.

Data Business Warehouse developed during CareWell.

Allows data to be collected from several databases in a standardised way.

The prediction risk algorithm is applied manually.

The outcome of the risk stratification at patient level is uploaded into the EHR.
Evaluation framework

- Evaluating integrated healthcare service delivery processes (process evaluation) will improve the current scientific knowledge base on barriers and facilitators.

- Scientific knowledge will be generated on outcomes of integrated care service delivery from the perspective of all actors involved.

- MAST evaluation framework adapted to the needs of CareWell.

- Assessment of the real-life effectiveness of the trialed services with a high degree of external validity.

- A valid estimate of the expected impact of the new organisational models in other regions in Europe through the inclusion of pilot sites with mostly heterogenous current organisational models.

- Objective: to represent the pathway followed by frail patients with multiple diseases to test different possible interventions in order to maximise health benefits.

- Key indicators: number of contacts (avoided rehospitalisations, hospital days, emergency department visits at individual level) and costs.
Putting into place ICT-supported, integrated health and social care services means that a multitude of stakeholders are affected by changes to their working process and often to their economic performance.

The ASSIST-tool provides a framework for socio-economic impact assessment and business models for integrated care.

The approach is founded on cost-benefit analysis and:

- allows identifying and addressing stakeholders that lose through the service and thus may become strong veto players
- allows monitoring of the actual and prospective service development over time
- includes non-financial factors which in many cases have a major impact on the behaviour of a stakeholder
- provides probabilistic methods for achieving rigorous results from data of varying quality
**Stakeholder analysis**

Please specify all stakeholders that participate in your service. To include a stakeholder in your assessment tick the box on the right side. You can rename stakeholders, but you cannot extend the number of stakeholders. In case you have ticked a box a new sheet should appear in Excel, which is named according to the acronym of the stakeholder. If you have finalised the stakeholder analysis go on with entering data for each stakeholder.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Subgroups</th>
<th>Worksheet Description</th>
<th>Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health / Care Provider Organisations (HPO)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tele Service Centre</td>
<td>1 HPO_sor</td>
<td>can be an entity of another HPO like a hospital</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>2 HPO_sor</td>
<td>working with clients; e.g. call-centre operator</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>3 HPO_sor</td>
<td>working with clients; e.g. call-centre clinician</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 HPO_sor</td>
<td>working In back-office; e.g. technician</td>
<td></td>
</tr>
<tr>
<td>Primary care organisations</td>
<td>1 HPO_spc</td>
<td>work in Primary care organisations</td>
<td>✓</td>
</tr>
<tr>
<td>Primary care nurses</td>
<td>1 HPO_spn</td>
<td>work in Primary care organisations</td>
<td>✓</td>
</tr>
<tr>
<td>Specialist care organisations</td>
<td>1 HPO_spc</td>
<td>work in Specialist care organisations</td>
<td></td>
</tr>
<tr>
<td>Specialist nurses</td>
<td>1 HPO_spn</td>
<td>work in Specialist care organisations</td>
<td>✓</td>
</tr>
</tbody>
</table>

| Hospitals                   | 1 HPO_hsp | work in Hospitals | ✓          |
|                            | 2 HPO_hsp | work in Hospitals | ✓          |
|                            | 3 HPO_hsp | work in Hospitals |            |

| Medical transportation services | 1 HPO_smb | work in Medical transportation services |            |
| Paramedics                   | 1 HPO_spn | work in Nursing homes | ✓          |
| Nursing homes                | 1 HPO_smb | work in Nursing homes |            |

<table>
<thead>
<tr>
<th>The target group</th>
<th>Value Unit</th>
<th>Time period</th>
</tr>
</thead>
<tbody>
<tr>
<td>What medical field or disease are you examining?</td>
<td>such as diabetes, chronic heart disease (CHD), chronic obstructive pulmonary disease (COPD), describe with your own words</td>
<td>patients with severe heart failure</td>
</tr>
<tr>
<td>What is the geographical scope of your service?</td>
<td>maybe this is a region or a hospital’s district</td>
<td>born area</td>
</tr>
<tr>
<td>Total number of patients receiving service</td>
<td>note down the number of patients with the above mentioned disease in the above mentioned regional scope when the service is fully scaled up</td>
<td>number of patients</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact</th>
<th>Guidance</th>
<th>Cost per set of devices for Clients / Patients 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A set includes all telmonitoring equipment necessary, as specified by the particular service, e.g. set dish, home hub and a place metre. Each patient receives one set that may consist of several devices and enter the market price for a set of devices used by one patient</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost per professional unit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>market price for one unit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What are your annual operating costs?</th>
<th>Average gross annual income of Tele Service Centre staff 1</th>
<th>Enter an average income for one full-time employee without employer contributions to social security</th>
<th>20,000 € per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average gross annual income of Primary care physicians</td>
<td>Enter an average income for one full-time employee without employer contributions to social security</td>
<td>80,000 € per year</td>
<td></td>
</tr>
<tr>
<td>Average gross annual income of Hospital physicians 1</td>
<td>Enter an average income for one full-time employee without employer contributions to social security</td>
<td>125,000 € per year</td>
<td></td>
</tr>
</tbody>
</table>
Value case analysis

Stakeholder identification
- Individuals
- Providers
- Payers

Initial data population
- Expert estimates
- Secondary sources

Check against reference database
- All involved and affected stakeholders included?

Improve value case
- SWOT
- Adjust service model

Impact identification
- Positive & Negative
- Financial, Resource, Intangible

Check against reference database
- All impacts considered?

Improve data accuracy
- Focusing on critical data

Scale up
- Final value model for mainstream operation

All involved and affected stakeholders included?

All impacts considered?

Financial, Resource, Intangible

Positive & Negative

Focusing on critical data
ASSIST-tool: outcomes

Key costs & benefits

<table>
<thead>
<tr>
<th>Key service costs</th>
<th>Stakeholder</th>
<th>Share of stakeholder’s total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard- and software cost</td>
<td>Telecare</td>
<td>89%</td>
</tr>
<tr>
<td>Recurring cost for hardware (including central components and end-user devices) and software licenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Effort – psychology sessions</td>
<td>Psych. service</td>
<td>52%</td>
</tr>
<tr>
<td>Time spent by staff of the psychological services to provide sessions online or in the community center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Effort – social worker support</td>
<td>Community center</td>
<td>53%</td>
</tr>
<tr>
<td>Time spent by social workers in the community center to provide support to informal carers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fee for service</td>
<td>Informal carer</td>
<td>52%</td>
</tr>
<tr>
<td>Monthly service fee paid by informal carers to providers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service travel time &amp; cost</td>
<td>Informal carer</td>
<td>33%</td>
</tr>
<tr>
<td>Travel time and cost spent by informal carers to go to face-to-face psychology sessions in the community center</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key service benefits

<table>
<thead>
<tr>
<th>Key service benefits</th>
<th>Share of total benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee for service</td>
<td>Telecare: 93%</td>
</tr>
<tr>
<td>Monthly service fee paid by informal carers to providers</td>
<td>Psych. service: 54%</td>
</tr>
<tr>
<td>Avoided home visits Help at Home</td>
<td>Community center: 89%</td>
</tr>
<tr>
<td>Staff resources saved through avoided visits of social workers of psychological services</td>
<td>Psych. service: 20%</td>
</tr>
<tr>
<td>Perception of value added</td>
<td>Informal carer: 53%</td>
</tr>
<tr>
<td>Overall service benefit as perceived by informal carers</td>
<td></td>
</tr>
<tr>
<td>Avoiding early institutionalization</td>
<td>Informal carer: 25%</td>
</tr>
<tr>
<td>Decreased carer burden resulting in cases of delayed institutionalization of cared-for person and resulting costs (incidence 3,6% p.a.)</td>
<td>Informal carer: 20%</td>
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<tr>
<td>Avoiding early home care</td>
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<td>Informal carer: 20%</td>
</tr>
</tbody>
</table>

Source: INDEPENDENT, service piloted in Trikala, EL

Socio-economic return

Scale-up net cumulative resources
Example: Basque Country

EHR Extension of functionality * contains results of questionnaires.

ePrescription Extension of functionality – more professionals

Remote monitoring: Monthly Phone calls following questionnaire protocols

Patient

GP

Better informed decision making(+)

Better coordination due to a better coordination(+)

Reduced time due to improved care provision on average per patient basis reduced (+)

Primary Care Nurse/Advanced Practice Nurse

Pharmacologic follow up in the community pharmacy(+) with reduction of visits to the primary care (+)

Time for training / education of patient/carer (-)

Cost for clinical assessment / therapeutic plan (-)

Primary care Social Worker

Better activation of social resources(+)

Time for reading extra information (-)

GP

Better informed decision making(+)

Better coordination due to a better coordination(+)

Reduced time due to improved care provision on average per patient basis reduced (+)

Primary Care Nurse/Advanced Practice Nurse

Pharmacologic follow up in the community pharmacy(+) with reduction of visits to the primary care (+)

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Better activation of social resources(+)

Time for reading extra information (-)
Innovating & extending functionalities

Example: Basque Country

• The e-Prescription service in secondary care will be extended to include primary care with a shared database.
• The deployment of several web services designed to recover and upload data to the central e-Prescription database irrespective of whether the prescription request is made from the module in the primary or secondary care IT system.
• If a patient is diagnosed and classified in the EHR as chronically ill, a follow-up prescription can be easily obtained at the pharmacy.
• The core working group agreed upon a questionnaire to assess the patient’s general health status, symptoms, treatment adherence, and specific questions related to congestive heart failure, diabetes and COPD.
• Primary care nurses are responsible for performing the questionnaire; depending on the answers gathered the nurse can give advice or schedule a GP visit (face-to-face or telephone).
• The information collected is registered in a structured form in the EHR, so all healthcare professionals can access to it.
• By using the questionnaire, a proactive follow-up is done and early worsening symptoms can be detected and admissions avoided.
## Partners

<table>
<thead>
<tr>
<th>Region</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basque Country, Spain</td>
<td><img src="image1" alt="Osakidetza" /></td>
</tr>
<tr>
<td>Apulia, Italy</td>
<td><img src="image3" alt="ARES POLOGA" /></td>
</tr>
<tr>
<td>Veneto Region, Italy</td>
<td><img src="image4" alt="ULSS 2 METRE" /></td>
</tr>
<tr>
<td>Zagreb, Croatia</td>
<td><img src="image5" alt="FARMADKONOMIKA" /></td>
</tr>
<tr>
<td>Lower Silesia, Poland</td>
<td><img src="image7" alt="DOLNY SLASK" /></td>
</tr>
<tr>
<td>Powys, Wales, UK</td>
<td><img src="image8" alt="GIG NHS WALES" /></td>
</tr>
<tr>
<td>Other Partners</td>
<td><img src="image10" alt="HIM" /></td>
</tr>
</tbody>
</table>
Thank you for your attention!

Contact:

empirica Gesellschaft für Kommunikations- und Technologieforschung mbH
Oxfordstr. 2 - D-53111 Bonn – Germany
Tel: +49-228-98530-0
eMail: CareWell(at)empirica.com

www.carewell-project.eu

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